

reduction. If a plate must be printed from several blocks its cost is increased, for several blocks are more expensive than one single block whose area is equal to the sum of the several. A little careful measurement of the "copy" and calculation will often save much time and disappointment in the appearance of the published illustrations.

Drawings can usually be reproduced in zinc, but drawings with fine details and photographs require copper, which at present costs twice as much as zinc. All drawings must be made with jet black ink, not the common bluish writing ink which will not photographically reproduce. A half-tone, which is the form in which photographs are reproduced, ordinarily shows the background of the photograph, hence if several photographs are associated side by side to form a plate and their backgrounds are of different shades of color, this difference shows also in the half-tone when printed and produces a displeasing effect. All cutting away of backgrounds or any manipulation necessary to remove imperfections in the photograph is only done at additional charge.

Questions and Answers.

THE NEWS invites those having any entomological questions which they wish answered to send such in for publication under this heading, and also invites answers from its readers or others to these questions. Questions and replies should be as brief as possible and the Editors reserve the right not to publish any of either class which seem to them objectionable or inappropriate. Those sending in contributions to this department will please indicate whether they wish their names or merely one or more initials to appear in connection with their communications, but all such must be accompanied by the full name and address of the writer for the information of the editors.

QUESTION No. 3.—Green geometers usually lose much of their color in the relaxing jar. Can this be avoided and how? I would like to hear from Lepidopterists on the subject.—G. C.

Notes and News

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

Psyllia buxi Linn. in New Jersey (Homop.).

During the summer of 1916 adults of this species were taken at Springfield, Rutherford, East Orange and Riverton on boxwood plants growing in nurseries. The plants on which they were found were old and well established, having been imported a number of years ago, so there is no doubt about the species being established in New

Jersey. The curled condition of the foliage due to larval activities is quite a common occurrence on boxwoods imported from Holland and it was undoubtedly introduced from this country. It is probably also established in other parts of New Jersey, especially on estates where boxwood hedges and plantings are common and surely must occur in other Eastern States too, inasmuch as it has been mentioned at different times in the News Letters of the Federal Horticultural Board as being found on imported boxwoods. Considering its method of overwintering, it is evidently being introduced more or less regularly every time imported boxwoods are received in this country.

In Smith's "Cat. Ins. of N. J.," p. 109, can be found the following note: "*Psylla buxi* Linn. An imported species on *Buxus sempervirens*, which has been found in Jersey City." This does not however lead one to assume that it is established in New Jersey. In Van Duzee's Check List of the Hemiptera of America, North of Mexico, it is not recorded.

A brief account of *Psyllia buxi* in Holland and its importance as a pest can be found on page 176 of Vol. I, "Ziekten en Beschadigingen der Tuinbouwgewassen" by M. Van Den Broek en P. J. Schenk. This article states that adults appear in May and June depending on the temperature and locality and that later about the time the plant has formed new buds for next season, each female lays from one to three eggs on the leaves at the tips of the branches. These hatch before winter and the nymphs which are covered with a white, waxy substance hibernate under the buds in the axils of the leaves. When the buds develop in the spring, the whitish masses covering the nymphs are readily seen. The injury resulting from the activity of the nymphs consists in a curling of the leaves so that they resemble little cups or hollow hemispheres.

In New Jersey adults were taken about the middle of July and also in August and the tips of the branches of many plants showed the characteristically curled leaves. According to the Dutch authors, good results were obtained in the way of control by spraying in the spring with a 7.5 per cent. of soluble carbolineum emulsion. As far as is known, no remedial measures have ever been attempted against this insect in New Jersey. In fact, many persons have assumed that the peculiar curling of the leaves is characteristic of boxwoods and certainly no great disfigurement takes place provided the infestation is slight.

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The O. B. Johnson Entomological Collection.

Orson Bennett Johnson, professor emeritus of zoology in the University of Washington, has given the university his valuable entomological collection.—*Science*, Nov. 3, 1916, p. 635.